


# ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18  
Stylesheet Version v18.0

Title of Invention	METHOD OF DEPOSITING METAL FILM AND METAL DEPOSITION CLUSTER TOOL INCLUDING SUPERCRITICAL DRYING/CLEANING MODULE						
Application Number: 09/841800							
Confirmation Number: 6810							
First Named Applicant: Maximilian Biberger							
Attorney Docket Number:							
Search string: ( 5807607 or 5847443 or 5872061 or 5893756 or 5896870 or 5904737 or 5992680 or 5994696 or 6001133 or 6005226 or 6037277 or 6063714 or 6099619 or 6100198 or 6128830 or 6140252 or 6171645 or 6200943 or 6216364 or 6224774 or 6228826 or 6232238 or 6232417 or 6239038 ).pn.					RECEIVED NOV 18 2003		
US Patent Documents							
Note: Applicant is not required to submit a paper copy of cited US Patent Documents							
init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
<input checked="" type="checkbox"/>	1	5807607	1998-09-15	Smith et al.			
<input type="checkbox"/>	2	5847443	1998-12-08	Cho et al.			
<input type="checkbox"/>	3	5872061	1999-02-16	Lee et al.			
<input type="checkbox"/>	4	5893756	1999-04-13	Berman et al.			
<input type="checkbox"/>	5	5896870	1999-04-27	Huynh et al.			
<input type="checkbox"/>	6	5904737	1999-05-18	Preston et al.			
<input type="checkbox"/>	7	5992680	1999-11-30	Smith			
<input type="checkbox"/>	8	5994696	1999-11-30	Tai et al.			
<input type="checkbox"/>	9	6001133	1999-12-14	DeYoung et al.			
<input type="checkbox"/>	10	6005226	1999-12-21	Aschner et al.			
<input type="checkbox"/>	11	6037277	2000-03-14	Masakara et al.			
<input type="checkbox"/>	12	6063714	2000-05-16	Smith et al.			
<input type="checkbox"/>	13	6099619	2000-08-08	Lansbarkis et al.			
<input checked="" type="checkbox"/>	14	6100198	2000-08-08	Grieger et al.			

<i>CME</i>	8	6306564	2001-10-23	Mullee	B1
	9	6331487	2001-12-18	Koch	B1
	10	6344243	2002-02-05	McClain et al.	B1
	11	6358673	2002-03-19	Namatsu	B1
	12	6361696	2002-03-26	Spiegelman et al.	B1
	13	6367491	2002-04-09	Marshall et al.	B1
	14	6380105	2002-04-30	Smith et al.	B1
	15	6425956	2002-07-30	Cotte et al.	B1
	16	6436824	2002-08-20	Chooi et al.	B1
	17	6454945	2002-09-24	Weigl et al.	B1
	18	6458494	2002-10-01	Song et al.	B1
	19	6461967	2002-10-08	Wu et al.	B1
	20	6485895	2002-11-26	Choi et al.	B1
	21	6486078	2002-11-26	Rangarajan et al.	B1
	22	6486282	2002-11-26	Dammel et al.	B1
	23	6492090	2002-12-10	Nishi et al.	B1
	24	6500605	2002-12-31	Mullee et al.	B1
	25	6558475	2003-05-06	Jur et al.	B1
<i>CME</i>	26	6562146	2003-05-13	DeYoung et al.	B1

## US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

init	Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
<i>CME</i>	1	20010019857	2001-09-06	Yokoyama et al	A1		
	2	20010024247	2001-09-27	Nakata	A1		
	3	20010041455	2001-11-15	Yun et al.	A1		
	4	20010041458	2001-11-15	Ikakura et al.	A1		
	5	20020001929	2002-01-03	Biberger et al.	A1		
	6	20020055323	2002-05-09	McClain et al.	A1		
	7	20020074289	2002-06-20	Sateria et al.	A1		
	8	20020081533	2002-06-27	Simons et al.	A1		
	9	20020088477	2002-07-11	Cotte et al.	A1		
	10	20020098680	2002-07-25	Goldstein et al.	A1		
	11	20020106867	2001-09-27	Yang et al.	A1		
<i>CME</i>	12	20020112740	2002-08-22	DeYoung et al.	A1		

<i>CME</i>	13	20020112746	2002-08-22	DeYoung et al.	A1
	14	20020115022	2002-08-22	Messick et al.	A1
	15	20020117391	2002-08-29	Beam	A1
	16	20020123229	2002-09-05	Ono et al.	A1
	17	20020127844	2002-09-12	Grill et al.	A1
	18	20020132192	2002-09-19	Namatsu	A1
	19	20020141925	2002-10-03	Wong et al.	A1
	20	20020142595	2002-10-03	Chiou	A1
	21	20020150522	2002-10-17	Heim et al.	A1
<i>CME</i>	22	20030003762	2003-01-02	Cotte et al.	A1

## Remarks

Note: Remarks are not for responding to an office action.

Non US Patent and Publication references shall be filed under a separate paper transmittal. The current electronic filing contains part 4 out of a total of 5 electronic filings. Fee has been paid in previous electronic filing.

## Signature

Examiner Name	Date
<i>C. Euerhart</i>	<i>2-24-04</i>



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METHOD OF DEPOSITING METAL FILM AND METAL  
DEPOSITION CLUSTER TOOL INCLUDING  
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Application Number: 09/841800  
Confirmation Number: 6810  
First Named Applicant: Maximilian Biberger  
Attorney Docket Number:  
Search string: ( 5370741 or 5714299 or 5725987 or 5736425  
or 5766367 ).pn.



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### US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
<i>C.M.B.</i>	1	5370741	1994-12-06	Bergman			
<i>C.M.B.</i>	2	5714299	1998-02-03	Combes et al.			
<i>C.M.B.</i>	3	5725987	1998-03-10	Combes et al.			
<i>C.M.B.</i>	4	5736425	1998-04-07	Smith et al.			
<i>C.M.B.</i>	5	5766367	1998-06-16	Smith et al.			

### Remarks

Note: Remarks are not for responding to an office action.

Non US Patent and Publication references shall be filed under a separate paper transmittal. The current electronic filing contains part 2 out of a total of 5 electronic filings. Fee has been paid in previous electronic filing.

### Signature

Examiner Name	Date
<i>C. Stuehler</i>	2-24-04



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Stylesheet Version v18.0

Title of  
Invention

METHOD OF DEPOSITING METAL FILM AND METAL  
DEPOSITION CLUSTER TOOL INCLUDING  
SUPERCRITICAL DRYING/CLEANING MODULE

Application Number: 09/841800



Confirmation Number: 6810

First Named Applicant: Maximilian Biberger

Attorney Docket Number:

Search string: ( 6251250 or 6255732 or 6270531 or 6270948  
or 6277753 or 6284558 or 6286231 or 6306564  
or 6331487 or 6344243 or 6358673 or 6361696  
or 6367491 or 6380105 or 6425956 or 6436824  
or 6454945 or 6458494 or 6461967 or 6485895  
or 6486078 or 6486282 or 6492090 or 6500605  
or 6558475 or 6562146 or 20010019857 or  
20010024247 or 20010041455 or 20010041458  
or 20020001929 or 20020055323 or  
20020074289 or 20020081533 or 20020088477  
or 20020098680 or 20020106867 or  
20020112740 or 20020112746 or 20020115022  
or 20020117391 or 20020123229 or  
20020127844 or 20020132192 or 20020141925  
or 20020142595 or 20020150522 or  
20030003762 ).pn.

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### US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
<i>Cite</i>	1	6251250	2001-06-26	Keigler	B1		
<i>Cite</i>	2	6255732	2001-07-03	Yokoyama et al.	B1		
<i>Cite</i>	3	6270531	2001-08-07	DeYoung et al.	B1		
<i>Cite</i>	4	6270948	2001-08-07	Sato et al.	B1		
<i>Cite</i>	5	6277753	2001-08-21	Mullee et al.	B1		
<i>Cite</i>	6	6284558	2001-09-04	Sakamoto	B1		
<i>Cite</i>	7	6286231	2001-09-11	Bergman et al.	B1		

<i>CME</i>	15	6128830	2000-10-10	Bettcher et al.	
<i>CME</i>	16	6140252	2000-10-31	Cho et al.	
<i>CME</i>	17	6171645	2001-01-09	Smith et al.	B1
<i>CME</i>	18	6200943	2001-03-13	Romack et al.	B1
<i>CME</i>	19	6216364	2001-04-17	Tanaka et al.	B1
<i>CME</i>	20	6224774	2001-05-01	DeSimone et al.	B1
<i>CME</i>	21	6228826	2001-05-08	DeYoung et al.	B1
<i>CME</i>	22	6232238	2001-05-15	Chang et al.	B1
<i>CME</i>	23	6232417	2001-05-15	Rhodes et al.	B1
<i>CME</i>	24	6239038	2001-05-29	Wen	B1

## Remarks

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Non US Patent and Publication references shall be filed under a separate paper transmittal. The current electronic filing contains part 3 out of a total of 5 electronic filings. Fee has been paid in previous electronic filing.

## Signature

Examiner Name	Date
<i>C. S. K. K. K.</i>	<i>2-24-04</i>

FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: SSI-02001		Serial No.: 09/841,800		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)				Applicants: Maximilian A. Biberger et al.				
				Filing Date: April 24, 2001				
(37 CFR § 1.98(b))				Group Art Unit: 2825				
FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS								
		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
							Yes	No
CME	AA	DE 39 04 514 C2	08/23/90	Germany	D 06 L	1/00		X
	AB	DE 39 06 724 C2	09/13/90	Germany	D 06 P	1/90		X
	AC	DE 39 06 735 C2	09/06/90	Germany	D 06 L	3/00		X
	AD	DE 39 06 737 A1	09/13/90	Germany	D 06 M	11/59		X
	AE	DE 40 04 111 C2	08/23/90	Germany	D 06 L	1/00		X
	AF	DE 43 44 021 A1	06/29/95	Germany	D 06 P	1/16		X
	AG	DE 44 29 470 A1	03/02/95	Germany	D 06 P	5/04		X
	AH	EP 0 518 653 B1	12/16/92	EPO	D 06 L	1/02		X
	AI	EP 0 620 270 A3	10/19/94	EPO	C11D	7/50		X
	AJ	EP 0 679 753 B1	11/02/95	EPO	D06F	43/00		X
	AK	EP 0 711 864 B1	05/15/96	EPO	D06G	1/00		X
	AL	JP 1-246835	10/02/89	Japan	H 01 L	21/304		X
	AM	JP 8-186140	07/16/96	Japan	H01L	21/56		X
	AN	WO 90/06189	06/14/90	PCT	B08B	7/00		X
	AO	WO 90/13675	11/15/90	PCT	C22B	3/00		X
	AP	WO 93/14255	07/22/93	PCT	D06B	5/16		X
	AQ	WO 93/14259	07/22/93	PCT	D06M	11/76		X
	AR	WO 93/20116	10/14/93	PCT	C08F	14/18		X
	AS	WO 96/27704	09/12/96	PCT	D06L	1/00		X
	AT	WO 00/73241 A1	12/07/00	PCT	C04B	35/622		X
	AU	WO 02/09894 A2	02/07/02	PCT	B08B			X
	AV	WO 02/11191 A2	02/07/02	PCT	H01L	21/00		X
CME	AW	WO 02/16051 A2	02/28/02	PCT	B05D			X
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)								
CME	AX	"Porous Xerogel Films as Ultra-Low Permittivity Dielectrics for ULSI Interconnect Applications", Materials Research Society, pp. 463-469, 1997.						
CME	AY	Kawakami et al., "A Super Low-k (k=1.1) Silica Aerogel Film Using Supercritical Drying Technique", IEEE, pp. 143-145, 2000.						
CME	AZ	R.F. Reidy, "Effects of Supercritical Processing on Ultra Low-K Films", Texas Advanced Technology Program, Texas Instruments, and the Texas Academy of Mathematics and Science.						
CME	BA	Anthony Muscat, "Backend Processing Using Supercritical CO2", University of Arizona.						
CME	BB	D. Goldfarb et al., "Aqueous-based Photoresist Drying Using Supercritical Carbon Dioxide to Prevent Pattern Collapse", J. Vacuum Sci. Tech. B 18 (6), 3313 (2000).						
CME	BC	H. Namatsu et al., "Supercritical Drying for Water-Rinsed Resist Systems", J. Vacuum Sci. Tech. B 18 (6), 3308 (2000).						
CME	BD	N. Sundararajan et al., "Supercritical CO2 Processing for Submicron Imaging of Fluoropolymers", Chem. Mater. 12, 41 (2000).						
	BE							
	BF							
Examiner: C. Swerthoff				Date Considered: 2-24-04				
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								

ORM PTO-1449  
(Modified)U.S. Department of Commerce  
Patent and Trademark Office

Attorney Docket No.: SSI-02001

Serial No.: 09/841,800

INFORMATION DISCLOSURE STATEMENT BY APPLICANT  
(Use Several Sheets If Necessary)Applicant: Maximilian A. Biberger *et al.*

(37 CFR 1.98(b))

Filing Date: April 24, 2001

Group Art Unit: 2812

## FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

	Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
						Yes	No
<i>CME</i>	DE 198 60 084 A1	07/06/00	Germany	H 01 L	21/3213		X
<i>CME</i>	AB EP 0 822 583 A2	02/04/98	EP	H01L	21/306		X
<i>CME</i>	AC EP 0 829 312 A2	03/18/98	EP	B 08 B	3/08		X
<i>CME</i>	AD JP 2-209729	8/21/90	JP	H 01 L	21/302		X
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	BF						

Examiner:

*P. Suerk*

Date Considered:

*2-27-04*

EXAMINER:

Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.





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5320742 ).pn.

### US Patent Documents

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init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
<i>1-7/16</i>	1	2439689	1948-04-13	Hyde et al.			
	2	4349415	1982-09-14	DeFilippi et al.			
	3	4925790	1990-05-15	Blanch et al.			
	4	5071485	1991-12-10	Matthews et al.			
	5	5196134	1993-03-23	Jackson			
	6	5269850	1993-12-14	Jackson			
	7	5285352	1994-02-08	Pastore et al.			
<i>1-7/16</i>	8	5320742	1994-06-14	Fletcher et al.			

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### Remarks

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Signature

*C. Juerkett*

2-24-04